

## **ABSTRACT**

The invention relates to mutant nuclear hormone receptors that encode mutant nuclear hormone receptors, in which particular amino acid residues are substituted with respect to wild type, so as to be able to detect ligand binding to the mutant receptor by either a change in a physical property of the mutant receptor and/or an transcriptional induction of a nuclear hormone receptor construct. The invention also relates to a nuclear hormone receptor response element denoted by the formula YDRXZ comprising a direct repeat (DR) comprising two half sites separated by X nucleic acid bases; wherein Z indicates the presence of at least one DR oriented in either a forward or reverse orientation; wherein Y equals 1 to 8 forward and/or reverse direct repeats; and X equals 1 to about 12.